

19 The composition of claim 10 wherein the lubricating composition is a manual transmission fluid.

20 The composition of claim 17 wherein the lubricating composition is a manual transmission fluid.

REMARKS

Claims 1-20 are pending in the application. Claims 1, 8, 10, and 17-20 have been amended. The amendments to the claims are believed to be wholly supported in the claims and specification as originally filed. More specifically, the amendments to claims 1 and 17 are found in the specification at page 4, lines 22-25. Claim 10 has been amendment to correct typographical errors and to indicate that the phosphite has at least one hydrocarbyl group containing from 2 to about 8 carbon atoms. Support for this amendment is found on page 16, lines 29-30. Support for the amendment to claim 8 is found in the specification page 16, line 26 through page 17, line 27.

This invention relates to a lubricant comprising (A) a basic metal salt of an acidic organic compound and (B) a hydrocarbyl phosphite, provided that the lubricant is free of metal deactivators. In one aspect the lubricant is a manual transmission fluid. The lubricants provide good friction, good antiwear and thermal stability properties.

Claims 8, 10, and 18-20 stand rejected under 35 U.S.C. section 112, second paragraph as being indefinite. Claim 8 stand rejected for the use of the term "lower alkyl". In view of the amendment to claim 8, this rejection is believed to be obviated. Further, the rejection of claim 10 is believed to been rendered moot by the amendment that corrected the obvious typographical errors. Claim 18-20 stand rejected since the compositions cannot be a manual transmission. Applicant believes the rejected is rendered moot in view of the amendment which indicates that the claims are directed to a manual transmission fluid.

Claims 1-15 and 17-20 stand rejected under 35 U.S.C. section 102b or 103 as being anticipated by or rendered obvious be Hollinghurst (US Patent 3,652,410). The rejection states that Hollinghurst anticipates the present claims because it teaches a basic detergent, friction modifier and an organic phosphite.

Claim 1 and 17 are directed to lubricating compositions comprising a (A) a basic metal salt of an acidic organic compound and (B) a hydrocarbyl phosphite, provided that the lubricant is free of metal deactivators. Claim 17 is made by blending the components to form the lubricating composition. These claims have been amended to require that the ratio of the equivalents of overbased material based on total base number to the equivalents of hydrocarbyl phosphite based on phosphorus atoms is at least one. Applicant has discovered that this ratio provides improved thermal stability. Claim 10 requires that the phosphite is present in an amount sufficient to deliver a specific amount of phosphorus of a phosphite having at least one hydrocarbyl group having from 2 to about 8 carbon atoms.

Hollinghurst does not teach or suggest the ratio of equivalents of basic salt to phosphorus atoms. Further Hollinghurst does not teach or suggest adding the specific amount of the specific phosphite of the present claims. Without teaching these claim limitations, Applicant submits that Hollinghurst does not anticipate the present claims. Further, since Hollinghurst fails to teach or suggest these claims limitations, then Applicant submits that Hollinghurst does not render the present claims obvious.

Claims 1-15 and 17-20 stand rejected under 35 U.S.C. section 102b or 103 as being anticipated by or rendered obvious by DiBiase (US Patent 5,523,005). The rejection states that DiBiase teaches a phosphite together with a basic calcium, barium or magnesium sulfonate. The rejection concludes that DiBiase anticipates or renders obvious the present claims.

DiBiase relates to gear oils for heavy duty off road or rear axles. DiBiase teaches a combination of a phosphite and basic metal salt. These additive are used together with a sulfurization product of an aliphatic olefin.

DiBiase does not teach or suggest manual transmission fluids. DiBiase does not teach or suggest the ratio of the equivalents of basic metal salt to phosphites. Further, DiBiase contains no teachings that would lead a skilled person to lubricants which are useful as manual transmission. The only example of DiBiase does not teach or suggest the claimed ratio of the equivalents of basic metal to phosphorus atoms or the resulting improved thermal stability. Absent these teachings, Applicant submits that DiBiase does not teach or suggest the present claims.

Claim 16 stands rejected under 35 U.S.C. section 102b or 103 as being anticipated by or rendered obvious by Hollinghurst (US Patent 3,652,410) in view of Ohtani (US Patent

5,344,579). The rejection states that Hollinghurst fails to teach the claims friction modifiers. Ohtani is cited as teaching this difference. As already discussed above, Hollinghurst does not teach or suggest the ratio of the equivalents of the basic metal salt with the equivalents of phosphite. Ohtani is not cited make up for the previous described deficiencies of Hollinghurst. Therefore, for the above reason, Applicant submits that claim 16 is not rendered obvious by this combination of patents.

In view of the above, Applicant submits that the cited references do not teach or suggest the present claims. Therefore Applicant requests withdrawal of the rejections and allowance of the claims.

In the event any issues remain in the prosecution of this application, Applicants request the Examiner call the undersigned attorney to expedite allowance of the claims. If any fees are required for the filing of these papers, Applicants request the Commissioner to charge those fees to Deposit Account #18-0988.

Respectfully submitted,

RENNER, OTTO, BOISSELLE & SKLAR, LLP

By 

William C. Tritt
Reg. No. 32,510

1621 Euclid Avenue
Nineteenth Floor
Cleveland, Ohio 44115
(216) 621-1113

Appendix

- 1 A lubricating composition comprising a major amount of an oil of lubricating viscosity and (A) a basic metal salt of an acidic organic compound and (B) a hydrocarbyl phosphite, provided that the lubricant is free of metal deactivators, wherein the ratio of the equivalents of overbased material based on total base number to the equivalents of hydrocarbyl phosphite based on phosphorus atoms is at least one.
- 8 The composition of claim 1 wherein (B) is a ~~lower~~ alkyl phosphite having at least one alkyl group selected from methyl, ethyl, propyl, butyl, pentyl and hexyl.
- 10 A lubricating composition comprising a major amount of an oil of lubricating viscosity and (A) from about 0.02% to about 5% by weight of a basic metal salt of an acidic organic compound and (B) a hydrocarbyl phosphite ~~independently~~ independently having ~~from~~ from about 2 to about ~~48~~ 8 carbon atoms in each hydrocarbyl group, wherein (B) is present in an amount to deliver from about 0.01% to about 0.3% by weight ~~phosphorus~~ phosphorus to the composition, provided that the lubricant is free of metal deactivators.
- 17 A lubricating composition prepared by blending a major amount of an oil of lubricating viscosity and (A) a basic metal salt of an acidic organic compound and (B) a hydrocarbyl phosphite, provided that the lubricant is free of metal deactivators, wherein the ratio of the equivalents of overbased material based on total base number to the equivalents of hydrocarbyl phosphite based on phosphorus atoms is at least one.
- 18 The composition of claim 1 wherein the lubricating composition is a manual transmission fluid.
- 19 The composition of claim 10 wherein the lubricating composition is a manual transmission fluid.
- 20 The composition of claim 17 wherein the lubricating composition is a manual transmission fluid.